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ABSTRACT

The bulletin gives Texas school personnel detailed suggestions for developing career exploration and investigation in middle schools. Prepared by a developmental committee composed of representatives of local school districts, regional education service centers, and career education research projects, it was designed to assist classroom teachers in integrating career education into the existing program. Each sample activity cites a performance objective that relates directly to a career concept and a career cluster. The activity is suggested for a particular unit in a subject area. More specificity is provided by citing an appropriate lesson in the unit for which the activity can be used. Many of the sample activities are easily adaptable to other subjects, some are alternatives for achieving the specific objective, while others are cumulative. Corresponding instructional resources are suggested. The following elementary level concepts of awareness are continued and expanded: attitudes toward work, attitudes toward those who work, seeing oneself as a valuable person, and the relationship of school to work. (MW)

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BULLETIN 735

CAREER INVESTIGATION MIDDLE SCHOOLS

TEXAS EDUCATION AGENCY
AUSTIN, TEXAS
1973



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5281, FEDERAL DISTRICT COURT, EASTERN DISTRICT
OF TEXAS, TYLER DIVISION**

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- (1) acceptance policies on student transfers from other school districts;
- (2) operation of school bus routes or runs on a non-segregated basis;
- (3) non-discrimination in extracurricular activities and the use of school facilities;
- (4) non-discriminatory practices in the hiring, assigning, promoting, paying, demoting, reassigning or dismissing of faculty and staff members who work with children;

- (5) enrollment and assignment of students without discrimination on the ground of race, color or national origin; and
- (6) evidence of published procedures for hearing complaints and grievances.

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Foreword

A major goal of public education in Texas is to develop economic and occupational competency in students. Meeting this goal means assisting young people to discover and prepare for satisfying, productive means of earning their livings.

Local school districts are, therefore, encouraged to develop and implement career education comprehensively from kindergarten through the twelfth grade for all pupils and in all programs.

This bulletin, one of a series, gives Texas school personnel detailed suggestions for developing career exploration and investigation in middle schools. It was prepared by a developmental committee composed of representatives of local school districts, regional education service centers, and career education research projects, in cooperation with the Texas Education Agency staff.

Other bulletins in this series provide suggestions concerning career education in the elementary school and the high school.

J. W. Edgar
Commissioner of Education

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Austin, Texas**

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Rationale

Since most people spend a great part of their lives in some form of work--either as a means of earning a living, performing a social service, or simply fulfilling a personal need for achievement--the public schools should endeavor to relate the academic area of the curriculum to the realities of the work world.

Career education concepts can be integrated into the curriculum in such a way as to encourage students to make tentative career choices according to their own perceptions of their interests and abilities. As students investigate and develop interests, they will be able to begin directing their activities toward a narrower field of inquiry and research into career selection.

In this bulletin for middle schools, career education is designed to continue the general objectives of awareness begun in the elementary grades and to initiate the objectives of investigation into the career fields. At the end of the middle school experiences, students should:

- have firsthand acquaintance with the economic system--as consumers and as observers of those who work to produce goods and perform services;

- be aware of the career fields identified by the U. S. Office of Education and possess indepth knowledge of several career fields;

- have explored rather thoroughly their own values, interests, and educational achievements;

- be prepared to select a tentative high school educational plan best suited to their individual needs and desires;

- be able to integrate their knowledge of themselves and of the world of work in order to identify careers for which they will prepare;

- recognize the changing nature of career commitment throughout an individual's lifetime and be able to reevaluate career choices with the possibility of making further choices later.

The activities selected are samples for integrating career education with the middle school curriculum and were selected in order to emphasize:

- thinking skills;
- the instructional strategies that are designed to produce change;
- the decision-making process.

To The Administrator

The administrative personnel must provide continuing support to teachers. The principal should see that teachers are provided with adequate materials, equipment, facilities, and time for planning. A team effort that involves the principal, counselors, teachers, librarians, and other school personnel should be used to provide the best environment in which the students work. The principal's role of facilitator and coordinator of the total effort can make career education a viable part of education for a productive and meaningful life.

Ongoing staff development for the acquisition of skills and attitudes, with emphasis on assessment and evaluation, should be a significant part of the implementation of career education. Staff development will be stronger if it involves the community. This involvement will stimulate interest and support of parents, business, and industries. The principal, with the help of the superintendent, should make available various resources, including both experiences and expertise.

The guidance program of the middle school should contribute to the investigative objectives. The counselor should serve as a resource person, coordinate information collection, and assist in individual and group assessment. He should become a pivotal person in planning, organizing, and evaluating career education.

Determining the success of career education depends upon evaluating its processes and its effects on participants. Appropriate data need to be presented to school boards and the general public about the effectiveness of the redirected programs. Local districts should determine specific responsibility among their personnel for the evaluation process.

The school district should consider the possibilities of using Occupational Awareness courses as a means of achieving selected goals of career education. Further information on the Occupational Awareness program may be obtained from the Texas Education Agency.

To The Teacher

Career education offers teachers another form of motivation for teaching the basic academic skills since, for many students, it is easier to learn a skill after having seen a need for it. It is hoped that the incorporation of career education into the basic curriculum will aid the teacher in capitalizing on the interests of each student and in providing individualized experiences that will guide the student into assuming more responsibility for his own learning.

Resource personnel drawn from the total community plus curriculum and materials which are present oriented as well as future oriented will

provide an environment for meaningful educational experiences.

It is important to note that, although the implementation of the career education concept is everyone's responsibility, the teacher is the key to helping students understand themselves in terms of their values, interests, and abilities and to see themselves and others as worthy and useful persons.

This bulletin is designed to assist classroom teachers to incorporate career education into the existing program. The bulletin is not comprehensive; rather it may be expanded to meet the teacher's needs.

Keys To Using This Bulletin

Each sample activity cites a performance objective that relates directly to a career concept and a career cluster. It is understood that in each case there are other objectives which are being met both in the subject content and in career education.

The activity is suggested for a particular unit in a subject area. More specificity is provided by citing an appropriate lesson in the unit for which the activity can be used. Many of the sample activities are easily adaptable to other subjects, and they

should serve as a stimulus for further development on the local level. Some of the activities are alternatives for achieving the specific objective while others are cumulative.

Teachers are encouraged to evaluate the activities and to modify, replace, or discard accordingly. Care should be taken not to minimize the task of implementing career education goals into the curriculum. This bulletin, supported by a strong staff development effort, can serve as a beginning.

Career Education Concepts

In this bulletin the elementary level concepts of awareness are continued and expanded. Basically, these awareness concepts concern (1) attitudes toward work, (2) attitudes toward those who work, (3) seeing oneself as a valuable person, and (4) the relationship of school to work. The concepts used for the middle school are referred to directly in the sample activities.

- An understanding and acceptance of self is important throughout life.
- Individuals differ in interests, abilities, attitudes, and values.

Career Clusters*

Business and Office Occupations
Marketing and Distribution Occupations
Communications and Media Occupations
Construction Occupations
Manufacturing Occupations
Transportation Occupations
Agri-business and Natural Resources Occupations
Marine Science Occupations

- Job opportunities may be determined by where one lives, by supply and demand, or by changing conditions.
- Job specialization leads to interdependency.
- Investigative experience helps improve knowledge about careers.
- Related occupations are grouped into clusters.
- Every career requires some special preparation.
- School subjects have significance for career exploration.

Environment Control Occupations
Public Services Occupations
Health Occupations
Hospitality and Recreation Occupations
Personal Services Occupations
Fine Arts and Humanities Occupations
Consumer and Homemaking-Related Occupations

*Source: U.S. Office of Education

CONCEPT: Every career requires some special preparation.

CAREER CLUSTER: All clusters

SUBJECT: Typewriting

UNIT: Applying for a job

Performance Objective: Using a typewriter, the student will be able to make application for a job, including a letter of application, resumé, and job application form.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Typing personal business letters	1. Have each student select a classified advertisement from a newspaper for a job which interests him. Determine whether this will be a real or simulated experience.	Local newspaper
Typing business forms	2. Have each student compose a letter of application for the ad he has selected	Job application form obtained from company of the community
	3. Have each student type a resumé to be enclosed in the letter of application. The resumé should consist of personal information, education, work experience, and references. Be sure that the student knows that each reference should be asked for permission.	
	4. Have each student fill in a job application form.	
	5. Devise an appropriate way of having the students share the completed resumé and forms.	
	6. Compose a letter to a friend or relative who has recently been employed inquiring about the process.	

CONCEPT: Investigative experience helps improve knowledge about careers.

CAREER CLUSTER: Business and Office Occupations **SUBJECT:** Typewriting

UNIT: Basic Typewriting Applications

Performance Objective: Student will be able to name at least four types of equipment which require keyboard skills related to typewriting and describe the training needed pursuant to a career.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Typing reports Composing at the typewriter Typing tables	1. Each student will research various resources for occupations which require keyboard skills related to typewriting, compiling information on note cards about career possibilities and the type and amount of training needed in the different occupations in this cluster. 2. Type the title page and an outline for a report. 3. Using information from note cards, compose a report naming the different types of equipment and the preparation skills essential to building a career related to that particular type of equipment. 4. Type in tabulated form the information obtained in No. 1 using headings of <u>Occupation</u>, <u>Equipment Used</u>, <u>Preparation Required</u>. Under <u>Preparation Required</u> use high school, technical training, or college.	<u>Dictionary of Occupational Titles</u>. Vol. II. 3rd ed. Washington, D. C.: U. S. Department of Labor, 1965. <u>Occupational Outlook Handbook Bulletin</u> 1700. Washington, D. C.: U. S. Department of Labor, Bureau of Labor Statistics, annual.

CONCEPT: Individuals differ in their interests, abilities, attitudes, and values.

CAREER CLUSTER: Hospitality and Recreation; **SUBJECT:** Physical Education
Health

UNIT: Health and Fitness for Daily Living

Performance Objective: After identifying the types of physical work demanded in an occupation that presently has interest for him, the student will be able to design a physical fitness program best suited to the occupation and will justify the elements included in the program.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Assessment of physical fitness	1. Have students select occupations in which they are presently interested. 2. Have the students identify through research, including interviews, the types of physical work demanded by the occupation. 3. Have each student make an assessment of his physical fitness. 4. Have each student design a fitness program utilizing facilities and equipment available at home, school, or in the community which would prepare him physically for that occupation. If any occupations chosen require minimal physical activity, have those students design an appropriate physical fitness program.	Texas Education Agency. <u>Secondary School Health Education Curriculum Guide.</u> Bulletin 691. Austin: Texas Education Agency, 1970. President's Council on Physical Fitness, Washington, D. C. 20202. (Request list of publications.) Texas Education Agency. <u>Planning the Secondary</u>

LESSON
CORRELATION

SAMPLE ACTIVITIES

RESOURCES

5. Have the students group themselves with other students with whom they are willing to share their information about themselves which led to their fitness program designs.
6. Have the students try out the program for two weeks and report on progress and/or recommended modifications.

School Physical Education Program. Bulletin 625. Austin: Texas Education Agency, 1963.

Vestal, Theodore M., and Baker, Neal A., Jr. An Analysis of Fifteen Occupational Clusters Identified by the U.S. Office of Education. Sherman, Texas: Grayson County College, 1972. Prepared under a grant from the Texas Education Agency.

CONCEPT: Every career requires some special preparation.

CAREER CLUSTER: Hospitality and Recreation; **SUBJECT:** Physical Education **UNIT:** Lifetime Sports

Performance Objective: During a "sport of the month" emphasis on lifetime sports, students will complete a project on careers related to the sport selected for emphasis.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Any part of the life- time sports unit	1. Have students interview persons working on jobs related to the lifetime sport selected for the month. Include job qualifications, training needed, opportunities, interests, and work environment. 2. Have students write up interviews for the career column in the school newspaper, and/or begin a file of cassette tapes on various jobs related to lifetime sports for the library. 3. Invite resource persons from the community to visit physical education classes to discuss job roles, qualifications, and opportunities. Discuss how avocations can lead to occupations. 4. Make a tree chart listing all occupations related to the selected lifetime sport.	Bibliography of resource materials on lifetime sports from the Health and Physical Education Section, Texas Education Agency, 201 East 11 Street, Austin 78701 Texas View. El Paso: Texas Education Agency and Region XIX Education Service Center. (Descriptions of 300 occupations from the <u>Occupational Outlook Handbook</u>, relating them to Texas.) <u>Occupational Outlook Handbook</u>

CONCEPT: Job specialization creates interdependency.

CAREER CLUSTER: Marketing and Distribution

SUBJECT: Mathematics

UNIT: Graphing

Performance Objective: The student will be able to name five ways in which marketing and distribution depends on other career clusters.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Construction and interpretation of graphs	1. Pass out magazines, newspapers, and advertising pamphlets. Discuss how each product being advertised depends on other occupations. 2. Present bar or broken line graphs of sales records of salesmen. Let the students interpret and analyze the data given on each graph. 3. Discuss the interdependency of marketing and distribution careers and careers of other clusters.	Magazines, newspapers, pamphlets <u>Dictionary of Occupational Titles</u>. Vol. II. 3rd ed. Washington, D. C.: U. S. Department of Labor, 1965. (DOT) <u>Occupational Outlook Handbook</u>. Bulletin 1700. Washington, D. C.: U. S. Department of Labor, Bureau of Labor Statistics, annual.

CONCEPT: Job opportunities may be determined by supply and demand, where an individual lives, and/or by changing conditions.

CAREER CLUSTER: Construction

SUBJECT: Mathematics

UNIT: Geometry

Performance Objective: Given three occupations in the construction industry, the student will be able to name one reason that each occupation is in demand in a particular locality.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Geometric constructions and designs	1. Bring tools and materials of the construction industry to class. Discuss how the materials may be used according to supply and demand of particular jobs. 2. Discuss the changes in methods of construction in the last 20 years and how these changes have created new job opportunities. 3. Bring pictures of both ancient and modern architectural designs to class. Discuss how these architectural designs relate to geometric designs studied in mathematics. Compare changes.	Construction tools, materials, magazines, architectural design books. <u>DOT</u> <u>Occupational Outlook Handbook</u>

CONCEPT: School subjects have significance in the area of career investigation.

CAREER CLUSTER: Business and Office Occupations

SUBJECT: Mathematics

UNIT: Money and Banking

Performance Objective: After visiting a bank, the student will be able to name four ways bank employees use mathematics.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Bank accounts Deposits and with- drawals Computing interest	1. Plan a field trip to a local bank. Ask the students to observe how each bank employee uses mathematics. 2. Pass out bank deposit slips and blank checks obtained from a local bank. Let the students practice filling in the necessary information. 3. Request a resource speaker from a local bank to speak to the class about the necessity of mathematics in banking as a career and as a service to consumers.	Deposit slips, checks <u>DOT</u> <u>Occupational Outlook</u> <u>Handbook</u>

CONCEPT: School subjects have significance in the area of career investigation.

CAREER CLUSTER: Transportation

SUBJECT: Mathematics

UNIT: Measurement

Performance Objective: Given five occupations in the air transportation industry, the student will be able to state one way in which measurement is applied in each of the five jobs.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Computation of air travel by mileage	1. Pass out airline schedules, rate books, tickets, and baggage checks. In a discussion, investigate the use of the various measurements used to develop the above items. This discussion should explore other attributes that are measured and the measurements used by the air transportation industry. 2. Review and examine the relation, distance equals rate times time, $D = RT$, to see its use in the schedules and operations of the airlines.	Airline schedules, airline rate books, sample airline tickets, baggage claim checks, airline travel folders <u>DOT</u> <u>Occupational Outlook Handbook</u>

CONCEPT: Understanding and accepting one's self is important throughout life.

CAREER CLUSTER: All clusters

SUBJECT: Mathematics

UNIT: Statistics

Performance Objective: The student will be able to list two methods by which he can develop a clear understanding of himself with regard to future career choices.

LESSON		SAMPLE ACTIVITIES		RESOURCES	
CORRELATION					
Uses of statistics Compilation of statistics	1.	Bring several achievement tests for discussion of the purposes and uses of tests for self-assessment. Examine the mathematical formulas or strategies used to obtain each score.		Guidance materials, achievement tests, <u>Kuder Preference Tests</u>	
	2.	Ask the school counselor to speak to the class on the role of the counselor in helping students understand themselves with regard to future career choices. This may include examples of the mathematics necessary for the job.		<u>DOT</u> <u>Occupational Outlook Handbook</u>	
	3.	Ask the students in cooperation with the counselor to take a preference test such as the <u>Kuder Preference Test</u> . Organize the results in a format that will illustrate the individual's areas of interests.			

CONCEPT: Individuals differ in their abilities, interests, and values.

CAREER CLUSTER: Communications and Media **SUBJECT:** Mathematics **UNIT:** Probability
Occupations

Performance Objective: The student will be able to list ways in which occupations in the telephone industry require different abilities and interests.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Simple probability Number combina- tions	1. Bring a nonoperating telephone to class. Discuss all the telephone numbers which are possible using the standard seven-digit number. What would the chances be of someone's dialing your number at random? 2. Bring literature to class showing the wide variety of occupations available in the telephone industry. When area codes are included, will there be any duplication of numbers? 3. Plan a field trip to the local telephone company. Investigate the jobs of people and machines in keeping these many numbers manageable. Discuss the different abilities needed by the various workers.	Pamphlets <u>DOT</u> <u>Occupational Outlook</u> <u>Handbook</u>

CONCEPT: Related occupations are grouped in clusters.

CAREER CLUSTER: Public Services

SUBJECT: Mathematics

UNIT: Sets

Performance Objective: The student will be able to list two occupations which may be grouped under the public services cluster.

**LESSON
CORRELATION**

SAMPLE ACTIVITIES

RESOURCES

Set definition and notation

1. Give the students a listing of the 15 career clusters. On another listing give the students 50 random occupations as listed in the Dictionary of Occupational Titles. Provide the students with research material and ask them to form the set of occupations that relate to public service. Ask the students to use set notation to indicate this group of occupations.

List of career clusters

DOT

Occupational Outlook
Handbook

2. Ask a resource speaker from a local office of the Texas Employment Commission or a commercial employment agency to speak to the class regarding careers in public services.

Speaker from the Texas
Employment Commission
or a commercial employ-
ment agency

CONCEPT: An understanding and acceptance of self is important throughout life.

CAREER CLUSTER: All Clusters

SUBJECT: Language Arts

UNIT: Composition

Performance Objective: As a result of writing about himself and discussing himself with a classmate, the student will be able to determine his view of himself by listing his predominant interests and abilities.

LESSON CORRELATION		SAMPLE ACTIVITIES	RESOURCES
Composition	1.	Have the students state in writing what types of persons they think they are, what they like to do, what their strengths and weaknesses are, and what they might like to do for a career someday.	Check sheets for students
Group discussion skills			Textbooks
Development of self-inventories	2.	Have students select three items from their composition that they would like to discuss with fellow students.	Resource books
Organization of lists according to priorities	3.	Lead class in discussion of the relationship of interests and abilities to various occupations.	
	4.	Have each student list several occupations that relate to his own interests and abilities.	

CONCEPT: Every career requires some special preparation.

CAREER CLUSTER: Fine Arts and Humanities; Hospitality and Recreational; Communications and Media

SUBJECT: Language Arts

UNIT: Paragraph Development

Performance Objective: As a result of conducting research concerning a "glamorous" occupation, the student will be able to describe the training, income, working conditions, and personal attributes associated with the occupation.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Spelling	1. Have the students make a list of "glamorous" occupations, such as professional athletics, acting, and singing.	Biographies
Individual book reports	2. Have each student select one occupation to explore in depth. This may include reading a biography, writing a letter to someone in the profession, watching talk shows on television, or conducting interviews. Have the students include the following points in the research:	<u>Dictionary of Occupational Titles</u> . Vol. II. 3rd ed. Washington, D.C.: U.S. Department of Labor, 1965. (<u>DOT</u>)
Paragraph development and organization	Training requirements Income Working conditions Personal attributes Life style as affected by "glamorous" occupations	
Writing in a daily journal	3. Have each student write a record of the activities for a day in the life of a person in the occupation researched.	

CONCEPT: Related occupations are grouped in clusters.

CAREER CLUSTER: Construction

SUBJECT: Language Arts

UNIT: Language Usage

Performance Objective: The student will be able to name and describe at least ten jobs in the construction industry.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Sentence structure	1. Take a field trip to a construction site nearby to observe various jobs.	Vestal, Theodore M., and Baker, Neal A., Jr. <u>An Analysis of Fifteen Occupational Clusters Identified by the U.S. Office of Education.</u> Sherman, Texas: Grayson County College, 1972. Prepared under a grant from the Texas Education Agency.
Forms of letters	2. Have the students identify and list on the chalkboard a number of jobs in the construction industry.	
Formal and informal English	3. Have the students bring pictures depicting each of the jobs identified and place them on the bulletin board.	
	4. Have each student write a letter requesting information concerning one of the jobs identified. Then have students exchange and answer each other's letters.	A manual of standard English usage
	5. Have each student develop a game matching job descriptions with job titles.	Slang dictionary

CONCEPT: Job opportunities may be determined by where one lives, by supply and demand, or by changing conditions.

CAREER CLUSTER: All Clusters

SUBJECT: Language Arts

UNIT: Travel

Performance Objective: The student will be able to describe how geographic locations affect job opportunities and avocational interests.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Nonfiction travel selections	1. After reading a selection dealing with a place to visit, have the students make a list of jobs that might be available in that area and tell why.	Travel magazines, travel folders
	2. Have the students pretend they are residents of the place they read about. Have the other students question them about that area with emphasis on job opportunities.	<u>National Geographic Magazine</u> Speaker from the Texas Employment Commission or a commercial employment agency.
	3. Invite a representative from the local office of the Texas Employment Commission or a commercial employment agency to speak to the class concerning the relationship of geography to jobs.	
	4. Have students write a travel feature article describing a selected geographical location, including the industries, predominant occupations, and specific avocations that are related directly to the area.	

CONCEPT: Investigate experience helps improve knowledge about careers.

CAREER CLUSTER: All Clusters

SUBJECT: Language Arts

UNIT: Verbal and Non-verbal Essays

Performance Objective: The student will be able to present the skills and techniques required by an occupation that interests him by means of a written, oral, or visual essay.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Photography	1. Have each student visit a place in the community where he can observe someone involved in a career the student may be interested in.	Poster board, paste, pictures
Formal and informal language	2. Have each student, or a team of students, take pictures to be used in a photographic essay. If they wish, students may prepare written or oral essays.	A manual of standard English usage Textbooks
Mechanics of writing dialog	3. Have the students give a demonstration of what they saw, such as:	Cameras
Collages	Type of work Working conditions Types of people the worker dealt with Tools of the trade	
	4. Have students prepare collages representing the careers they observed.	

CONCEPT: Job specialization leads to interdependency.

CAREER CLUSTER: All Clusters

SUBJECT: Language Arts

UNIT: Independent Reading

Performance Objective: The student will be able to identify all people upon whom he depended for development of a research report.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Reading for a purpose	1. Have each student select a study topic that deals with careers, utilizing brochures, pamphlets, newspapers, magazines, and books concerning careers.	Brochures, pamphlets, newspapers, magazines, and books concerning careers.
Current reports	2. Have the students turn in a written evaluation of their independent study projects listing the people who contributed to their study.	Reference books
Evaluation		Library resource room
Research techniques		

CONCEPT: School subjects have significance for career exploration.

CAREER CLUSTER: Communications and Media;
Business and Office Occupations

SUBJECT: Language Arts

UNIT: Vocabulary
Development

Performance Objective: The student will be able to list 15 occupations in the field of communications and identify some of the vocabulary unique to each occupation.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Vocabulary study	1. As part of the word study unit, guide the student in making a list of occupations in the field of communications.	<u>DOT</u> Bulletin board materials
Keeping a notebook	2. Have a group of students make a bulletin board display illustrating the occupations that are related to language arts.	Resource person from local community
Relating pictorial illustrations to meaning	3. Have students, through interviews with people they know, make specialized vocabulary lists unique to their occupations.	
Spelling	4. Invite a resource person--carpenter, editor, rancher, oil field worker--to speak to the class about the specialized vocabulary in his job.	

CONCEPT: Investigative experiences help improve knowledge about careers.

CAREER CLUSTER: Communications and Media

SUBJECT: Industrial Arts
Drafting

UNIT: Working Drawings

Performance Objective: The student will be able to list five characteristics of the job and the life style of the draftsman.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
The proper use of drafting instruments	1. Discuss with the class the duties of a draftsman.	Drafting instruments
Drawing three views of an object	2. Invite a draftsman to talk to the class regarding his job and the influence of the job upon his life style.	Drafting paper
Dimensioning a drawing	3. Have a class decide upon a project which each student will draw the plans for and later build in the woodworking laboratory.	Drafting manuals from industry
	4. Make sketches of the project to give to each student.	Guest speaker from industry
	5. Have each student make a set of working drawings from an engineer's sketch.	Woodworking laboratory

CONCEPT: Job specialization creates interdependency.

CAREER CLUSTER: Manufacturing

SUBJECT: Industrial Arts

UNIT: Mass Production

Performance Objective: The student will be able to perform one specialized task in a simulated manufacturing enterprise in cooperation with other students also performing specialized tasks.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Study of industrial processes through constructing a project	1. Organize a simulated corporation to mass produce note pads for the class.	Textbooks
Custom production and mass production	2. Identify the jobs that are included in the mass production of the note pads and analyze the tasks involved in each job.	Guest speaker in manufacturing
Characteristics of mass production	3. Invite a representative of a manufacturing firm to talk to the class regarding mass production in relation to our economic system.	Application forms
	4. Have students fill out applications for positions they wish to fill in the simulated corporation.	Suitable materials for constructing note pads
	5. Have the enterprise produce one note pad for each student in the class.	Appropriate supplies, tools, and machines for construction of the note pads
	6. Upon the completion of the unit of study, have the students write a paragraph explaining the reasons for specialized tasks in their simulated corporation and their like or dislike for the particular tasks they performed.	

CONCEPT: Job specialization creates interdependency.

CAREER CLUSTER: Fine Arts and Humanities

SUBJECT: Choral Music

UNIT: The Suite as a Musical Form

Performance Objective: Given one occupation from each job family within the fine arts cluster, the student will be able to name one way in which each occupation requires different abilities, interests, attitudes, and values.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Continued research into the historical development of famous musical compositions	1. Have the students research the story of the <u>Nutcracker Suite</u> and develop a stage play. 2. Have students rehearse the <u>Nutcracker Suite</u> . 3. Have the students visit the local community theater group to observe all the jobs, professional and volunteer, involved in a musical stage production. 4. Have the students list all the jobs observed on the field trip and discuss the differing abilities, interests, attitudes, and values exhibited. Have students investigate interdependency of these jobs.	Music for <u>Nutcracker Suite</u> Costumes, stage props, lighting, piano <u>Dictionary of Occupational Titles</u> . Vol. II. 3rd ed. Washington, D. C.: U. S. Department of Labor, 1965. (DOT) <u>Occupational Outlook Handbook</u> . Bulletin 1700. Washington, D. C.: U. S. Department of Labor, Bureau of Labor Statistics, annual.

CONCEPT: Job specialization creates interdependency.

CAREER CLUSTER: Communications and Media

SUBJECT: Choral Music

UNIT: Tape Recording

Performance Objective: The student will be able to explain how jobs in the sound recording industry are interdependent.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
History of record- ing instruments	1. Have the students collect pictures of recording instruments throughout history.	Materials for record- ing
Development of fidelity of sound in recordings	2. Play a 78 rpm record and a recent stereophonic record. Have the students compare the quality of the recordings.	<u>DOT</u>
	3. Have the students, as a class project, produce a tape of their own. The students should be assigned various job responsibilities related to the recording industry. Have students list the jobs that depended on completion of their own tasks.	
	4. Plan a field trip to a local radio or television or recording studio. Ask the students to observe the various jobs found in the recording industry.	

CONCEPT: Individuals differ in interests, abilities, attitudes, and values; therefore, understanding oneself is important.

CAREER CLUSTER: Fine Arts and Humanities

SUBJECT: Art

UNIT: Mask-Making

Performance Objective: The student should be able to state at least one way art facilitates self-expression.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Masks as a cultural artifact	1. Plan a field trip to a local museum. How does art depict various attitudes and values of people?	Masks and pictures of masks
Processes used in constructing masks	2. Pass out pictures of masks from past civilizations and discuss how they were used as forms of self-expression.	Opaque projector
Design, texture color, shape, and patterns in masks	3. Show pictures of African masks under an opaque projector and discuss the types of masks and the emotions expressed or portrayed.	Materials for making masks
Self-expression through mask-making	4. Have each student design and make his own mask and let others discuss what the mask expresses.	<u>Dictionary of Occupational Titles.</u> Vol. II. 3rd ed. Washington, D. C.: U.S. Department of Labor, 1965. (DOT)
	5. Display masks made by other students from previous years.	<u>Occupational Outlook Handbook.</u> Bulletin 1700. Washington, D. C.: U.S. Department of Labor, Bureau of Labor Statistics, annual.
	6. Lead class in a discussion of artistic self-expression in occupations and avocations.	

CONCEPT: School subjects have significance in the area of career exploration.

CAREER CLUSTER: Fine Arts and Humanities

SUBJECT: Art

UNIT: Lettering

Performance Objective: Given two occupations in advertising art, the student should be able to explain how lettering is necessary in each of the jobs.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Basic lettering skills	1. Discuss with the students the historical development of lettering.	Samples of lettering
Signs and symbols	2. Ask a resource speaker from a local advertising agency to speak to the class about job opportunities in advertising art and about necessary preparation for such jobs.	Collection of alphabets in books or on charts
Creative lettering	3. Have the students compare handmade and commercial samples of lettering.	Materials for lettering
	4. Have the students do sample pages of lettering in several styles.	Pen substitutes (flat sticks, dowels, bamboo joints)

DOT

Occupational Outlook
Handbook

CONCEPT: Investigative experiences help improve knowledge about careers.

CAREER CLUSTER: All Clusters

SUBJECT: Texas History and Geography

UNIT: Economic Development of Texas

Performance Objective: The student will be able to describe the preparation needed for a specific occupation.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Local community studies	1. Have each student interview a worker--and record the conversation--in his community to determine: - What the job title or specialty is - What special preparation was required - How the worker feels about being in that occupation - What the job environment is like - What additional training, if any, is required for advancement	Looseleaf notebook or file card box Community workers
2.	Have each student make a verbal presentation to the class regarding what he has learned, to include whether he might be interested in pursuing a career in that direction and giving reasons he would or would not be interested in that kind of work.	
3.	Have each student write the information he has gathered on note cards or looseleaf paper so that it may be placed in a class notebook or file box as important reference data for the entire class.	

CONCEPT: Related occupations are grouped into clusters.

CAREER CLUSTER: All Clusters

SUBJECT: Texas History and
Geography

UNIT: Conservation
of Resources

Performance Objective: The student will be able to list by clusters occupations needed to solve a conservation problem in Texas.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Conservation of Texas resources	1. Have the students look into conservation problems in their area of the State and choose one problem for a class project. 2. Invite a conservationist or appropriate individual who is familiar with that particular problem to speak to the class about the problem, the kinds of workers needed to improve the situation, and the methods and techniques that would be employed to solve the problem. 3. Have the students make a chart showing the inter-relationship of the workers needed and the career cluster(s) to which these workers belong. 4. Have the students then create a model of the project (perhaps a sand table) and decide which occupational roles each will play in attempting to make improvements.	County agricultural agent Materials for constructing a model of the project Information or speakers available from: Texas Forest Service, Texas A & M University, College Station 77843 Texas Parks and Wildlife Department, 100 John H. Reagan Building, Austin 78701 Texas Water Development Board, 301 West Second Street, Austin 78711

LESSON
CORRELATION

SAMPLE ACTIVITIES

RESOURCES

(Upon completion of the project, the students might invite the speaker back to the class to critique the project.)

Texas Water Quality
Board, 1108 Lavaca,
Austin 78701.

U. S. Geological Survey,
Department of the Interior,
306 East Eighth Street,
Austin 78701

Bureau of Economic
Geology, The University
of Texas at Austin, Austin
78712

U. S. Soil Conservation
Service, First National
Bank Building, Temple,
Texas 76501

CONCEPT: Investigative experience helps improve knowledge about careers.

CAREER CLUSTER: All Clusters

SUBJECT: Texas History and
Geography

UNIT: Natural Regions
of Texas

Performance Objective: The student will identify the basic skills required to perform the jobs in one of the geographical regions of Texas.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
The Gulf Coast Plain	1. Have students choose and investigate one of the occupations involved in production and transportation of the crops in the Gulf Coast Plain. 2. Have each student share with the class what he has learned through investigation of an occupation prevalent in that area. 3. Have students provided with an opportunity to observe and interview at least two persons who are engaged in the work of the occupations studied via field trips and/or guest speakers.	<u>Occupational Outlook</u> <u>Handbook</u> , Bulletin 1700. Washington, D. C.: U. S. Depart- ment of Labor, Bureau of Labor Statistics, annual. Resource person Field trips

CONCEPT: School subjects have significance for career exploration.

CAREER CLUSTER: All Clusters

SUBJECT: Texas History and Geography

UNIT: Problems and Progress since 1920

Performance Objective: The student will be able to specify which school subjects are necessary for successful performance in two occupations.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Study of individuals who were instrumental in facilitating State progress	1. Have students investigate the careers of notable Texans who were instrumental to the economic progress of the State of Texas from the 1920s through today.	Biographies of individuals being studied
	2. Have the students make a list of the school subjects which were necessary to the success of the persons whose careers are being investigated.	
	3. Have each student project a career needed in Texas today and list the school subjects he would need in order to be successful in that career.	

CONCEPT: Individuals differ in interests, abilities, attitudes, and values.

CAREER CLUSTER: All Clusters

SUBJECT: American History

UNIT: Growth of
Democracy in
America

Performance Objective: The student will be able to discuss why people have particular attitudes and values and be able to compare attitudes and values of the past with those of the present.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Reform move- ments and their leaders	1. Discuss American reform movements and generally define some of the attitudes and values apparent in such movements. 2. Have half the class choose noted reformers they would like to portray. Each student should study his chosen reformer in depth for greater understanding of that person's attitudes and values during a period of the Nation's history. 3. Inform the other half of the class of the particular reformers who will be portrayed and that they, as observers, will discuss the merits of the attitudes and values displayed after each portrayal. 4. Have the "portrayers" indicate what their occupational roles are, and give their views on the issues they represent. Allow time for rebuttal to the observers' comments.	Reference materials on reformers Chalkboard and chalk

5. After all portrayals have been completed, have students

- discuss how occupations of the reformers related to their attitudes and values;
- contribute to a list of attitudes and values which were shown during the portrayals;
- compare them with the attitudes and values they feel are prevalent in today's American society and with some of their own individual attitudes and values.

CONCEPT: Job opportunities may be determined by where one lives, by supply and demand, or by changing conditions.

CAREER CLUSTER: All Clusters

SUBJECT: American History

UNIT: The Industrial Revolution

Performance Objective: The student will be able to describe the relationship of location and supply and demand to occupational opportunities.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
The industrial North vs. the agricultural South	1. After discussing the Industrial Revolution, divide the class into two groups, one representing the South and one representing the North.	References for determining supply and demand for jobs during the 1800s.
	2. Have each student in the groups select an occupation that was available in his region and discuss with his group members the supply and demand for that job during that era.	Pertinent audiovisuals may be used to facilitate implementation of the activities.
	3. Have each group discuss their jobs with the other group. If any group member is dissatisfied with the job opportunities in his area, he may switch to the other group. However, he may switch only if he can devise a means of moving himself and his family to the other area, using the modes of transportation available to him, and if he can find an area with a demand for the job he wants during that particular era.	
	4. Lead the class in a discussion on the similarities of the conditions then as compared to the conditions today.	

CONCEPT: An understanding and acceptance of self is important throughout life.

CAREER CLUSTER: All Clusters

SUBJECT: American History

UNIT: Industrialization
of America and
its Impact on
People

Performance Objective: The student will be able to express the relationship between self-knowledge and wise career decisions.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Problem of job dissatisfaction	1. After discussion of recent reports of social changes and the new opportunities available today, have students select three occupations which appeal to them. 2. Have students then make a list of personal likes and dislikes, such as doing things with their hands, being indoors, and following orders. 3. Have each student compare his list of likes and dislikes to his three job specialties and determine whether he would be satisfied with performing any of them. Counselor assistance is suggested. 4. Have volunteer students write a role-playing skit which depicts how and why some people make wise career decisions and others do not. 5. Have the students enact the script. 6. At the conclusion of the role-playing session, have the students discuss their perceptions of how well the characters understood themselves and how their self-understanding or lack of it influenced the choices they made.	Teacher/counselor assistance for activities 3 and 4 if necessary Textbooks

CONCEPT: Job specialization leads to interdependency.

CAREER CLUSTER: All Clusters

SUBJECT: American History

UNIT: The United States
Becomes a Great
Industrial Nation

Performance Objective: The student will be able to illustrate two occupations dealing with mass production.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Mass production and the growth of corporations	1. Have the students indicate a particular job specialty in which they have some interest after discussion of mass production and job specialization. 2. Have each student study his chosen job specialty in depth and make a chart which indicates his job and the other job specialties which are related to his specialty. Two or more students may work together if their job specialties are interdependent. In addition, students may use pictures from magazines or drawings in constructing their charts. 3. Have each student or group of students present their charts to the class, giving a verbal explanation of how their particular specialty is dependent upon other specialties. 4. Have the students' charts used for display in the classroom or for a school display on career education.	<u>Occupational Outlook Handbook</u>. Bulletin 1700. Washington, D. C.: U.S. Department of Labor, Bureau of Labor Statistics, annual. Poster board, paste, scissors, magazines

CONCEPT: Related occupations are grouped into clusters.

CAREER CLUSTER: All clusters

SUBJECT: Life Science

UNIT: Food

Performance Objective: Students will be able to identify job specialties by groups and titles and compare them with those codified by various sources.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Measuring energy in food	1. Students in small groups will write a menu for either a low-carbohydrate, high-protein, low-calorie, or high-calorie dinner. Have them compute a calorie count for each meal.	Textbooks and laboratory manuals
Determining the number of calories contained in foods	2. Have students list and group the job specialties related to the meal. NOTE: Consider chain from producer to consumer.	Vestal, Theodore M., and Baker, Neal A., Jr. <u>An Analysis of Fifteen Occupational Clusters Identified by the U.S. Office of Education.</u> Sherman, Texas: Grayson County College, 1972.
	3. Have a student recorder list jobs as they were grouped and labeled on transparency film.	Prepared under a grant from the Texas Educa- tion Agency.
	4. Have the class as a whole evaluate those listed by small-group members as compared to those codified by various sources.	Equipment and supplies

CONCEPT: Every career requires some special preparation.

CAREER CLUSTER: Agri-business and Natural Resources; Hospitality and Recreation; Public Services; Environment Control; Construction

SUBJECT: Earth Science

UNIT: The Earth's Surface

Performance Objective: The student will be able to identify one or more differences in preparation requirements given for selected occupations.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Introduction to topographic mapping	1. Have the students select from various clusters job specialists that would utilize topographic mapping in their work. 2. Have the students research preparation requirements for each occupation selected. 3. Have the students identify at least one similarity and one difference in preparation requirements for each of the occupations selected. 4. Have class members list all job specialists selected on the chalkboard under the proper cluster. 5. List preparation requirements next to each job specialty.	Textbooks and laboratory manuals Equipment and supplies <u>Dictionary of Occupational Titles.</u> Vol. II. 3rd ed. Washington, D. C.: U. S. Department of Labor, 1965. (DOT) Vestal, Theodore M., and Baker, Neal A., Jr. <u>An Analysis of Fifteen Occupational Clusters Identified by the U. S. Office of Education.</u> Sherman, Texas:

**LESSON
CORRELATION**

SAMPLE ACTIVITIES

RESOURCES

6. Have students discuss with the class the items they put on the board.
7. Have students add to the list on the board as new units are studied.

Grayson County College, 1972. Prepared under a grant from the Texas Education Agency.

Resource people

CONCEPT: Job opportunities may be determined by where one lives, supply and demand and/or by changing conditions.

CAREER CLUSTER: Agri-Business and Natural Resources; Manufacturing; Transportation

SUBJECT: Earth Science

UNIT: Earth's Cycles

Performance Objective: The student will be able to chart four or more job specialties directly related to geographic characteristics of the area and compare these job specialties to jobs of the area as they existed 50 years ago, and as they may exist 50 years in the future.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Changing nature of the earth's surface	1. Have individual students or small groups collect data throughout the selected geographical area over a period of time. 2. Have students identify from the data collected four or more job specialties or avocations directly related to the geographic conditions. 3. Have students construct a data chart for the four or more job specialties identified above. 4. Have the students note the similarities and differences among the data on the chart and discuss the reasons for the differences and similarities and state the consequences. 5. Have students state the major reason and major consequence of the similarities and differences they note.	Textbooks and laboratory manuals Equipment and supplies <u>DOT</u> <u>An Analysis of Fifteen Occupational Clusters</u> <u>Texas View, El Paso: Texas Education Agency and Region XIX Education Service Center. (Descriptions of 300 occupations from the Occupational Outlook Handbook, relating them to Texas.)</u>

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
	6. Have students make generalized statements based upon information they have gained about these jobs.	Resource people
	7. Have students classify the jobs listed as those which existed 50 years ago and those which did not.	
	8. Have students write short narratives explaining why certain jobs have continued, others disappeared. What jobs that disappeared are now avocations?	
	9. Have students anticipate which jobs will be obsolete and what new jobs will exist during the next 50 years, based on what they have learned about the changing earth conditions.	

CONCEPT: School subjects have significance for career exploration.

CAREER CLUSTER: Communications and Media;
Environment Control; Transportation

SUBJECT: Earth Science

UNIT: Man and the Environment, The Hydrosphere,
Earth's Crust Redesignated

Performance Objective:

Students will be able to present arguments supported with scientific data for or against diverting water from the Mississippi River to arid areas of the Southwest.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Man and the environment	1. Have students interview by phone or in person Water Control Board members, U.S. Conservationists, National Wildlife Service personnel, biology teachers, industrial environmentalists, to gain insight into the need or lack of need for the proposed project.	Earth science textbook Laboratory manual
Mass movements	2. Have class discuss the jobs required for construction of the water project in cluster categories.	Equipment and supplies Free materials from: U.S. Soil Conservation Service, First National Bank Building, Temple, Texas 76501
Running water	3. Have class discuss their predictions of the changes which might occur in the topography, climate, animal life in the areas where the water would be furnished and the area that would be deprived of the water by the construction of the project.	Texas Parks and Wildlife Department, 100 John H. Reagan Building, Austin 78701
Responsibility man must assume when he decides to take major changes in the environment.	4. Have students organize a TV production company utilizing special strengths of the members of the groups. Strengths should include communications skills, graphic arts, debate, planning and research, data graphing.	Texas Water Quality Board, 1108 Lavaca, Austin 78701

LESSON
CORRELATION

SAMPLE ACTIVITIES

RESOURCES

- | | |
|---|--|
| 5. Have teams research and organize data which supports their hypothesis for or against the water project. | Resource people from the community |
| 6. Have students develop charts, graphs, slides to support their case. | Poster board, videotape recorder and camera, slide projector |
| 7. Have students present program for other related science classes or videotape and present to other classes. | |

CONCEPT: Individuals differ in their interests, abilities, attitudes, and values.

CAREER CLUSTER: Construction; Transportation; Manufacturing **SUBJECT:** Physical Science **UNIT:** Motion, Force, and Conservation Laws

Performance Objective: Students will be able to relate specific abilities needed for jobs listed among the construction, manufacturing and transportation clusters.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Relationship of work on an object to the energy gained by the object	1. Have the students identify about 30 jobs that involve some form of energy discussed in the lesson correlation as a major element of the job specialty; i. e., carpenters, mechanics, watchmakers, truck drivers, lumbermen, from the occupations listed among the transportation, construction and manufacturing clusters. (A laboratory experience should focus on the transfer of energy.)	Physical science textbook Laboratory manual Equipment and supplies Vestal, Theodore M., and Baker, Neal A., Jr. <u>An Analysis of Fifteen Occupational Clusters Identified by the U. S. Office of Education.</u> Sherman, Texas: Grayson County College, 1972. Prepared under a grant from the Texas Education Agency.
	2. Have the students classify the 30 jobs selected by the major type of ability needed (physical, mental, mechanical, creative, social, other).	
	3. Have the students classify the jobs requiring major physical ability according to physical endurance, muscular coordination, or manual dexterity. Have them determine those requiring major mental ability according to numerical, verbal, spatial, or clerical.	
	4. Have students select three job specialties they feel are most suited to their abilities and interests.	

CONCEPT: Investigative experiences help improve knowledge about careers.

CAREER CLUSTER: Public Service; Health; Commu- **SUBJECT:** Physical Science **UNIT:** Scientific Processes
nications and Media; Marine Science

Performance Objective: The student will be able to apply observation and interpretation skills to an investigation of job specialties and career clusters as identified on a current television program.

LESSON CORRELATION	SAMPLE ACTIVITIES	RESOURCES
Observation and interpretation	1. Have students select a current television series in which the main character uses investigation as a major element in the role specification.	Physical science textbook
Extending an observation into an inference and distinguishing between an observation and an inference	Example: <u>Marcus Welby</u> - Medicine <u>Owen Marshall</u> - Law <u>Rookies</u> - Police Science <u>The Men</u> - Journalism	Laboratory manual Home television
	2. Have students select one or more scenes to observe and record the scientific processes.	<u>An Analysis of Fifteen Occupational Clusters</u> <u>Identified by the U.S. Office of Education.</u>
	3. Have students evaluate the realism and logic of the process utilized.	
	4. Have students identify the job specialties observed or inferred during the telecast and record these on a chart.	
	5. Have students record the cluster after each job identified on the same chart.	
	6. Have students display their findings on the overhead projector for reactions from the class.	